

# Dual Mode Locomotive DE 30 AC/DM 30 AC for Long Island Rail Road



Type	DE 30 AC	DM 30 AC
Year	1997 – 1998	1997 – 1998
Wheel arrangement	Bo'Bo'	Bo'Bo'
Diesel engine rating	[kW] 2,237	2,237
Rating in DC 650 V mode	[kW] 2,150	2,150
Starting tractive effort	[kN] 360	360
Maximum speed	[km/h] 161	161
Weight	[t] 128	128
Track gauge	[mm] 1,435	1,435
Numbers built	23	23

In cooperation with its American partner EMD, Siemens is supplying the American market with the most advanced DM 30 AC passenger train locomotives. The locomotives are used in commuter service in the New York metropolitan area. A marked decrease in noise and a substantial improvement in fuel economy compared to the previously used locomotives set standards for ecofriendliness. The DM 30 AC is also capable of operating alternatively on the third rail (650 V) as an electric locomotive, so that it can be used in the tunnels leading into New York City.

## EMD DE30AC/DM30AC

[www.gmemd.com](http://www.gmemd.com)



Locomotive Sales • 9301 W. 55th St. • LaGrange, IL 60525

### Specifications

Model Designation	DE30AC	DM30AC
Total weight on rails	294,000 lbs.	294,000 lbs.
Height (top of rail to top of cooling fan)	14' 3.5"	14' 3.5"
Overall length	75'-0"	75'-0" over couplers
Fuel capacity	3,000 gal.	2,400 gal.
Outboard sanding	20 cu. ft. total	20 cu. ft. total

### Performance Specifications

3,000 THP locomotive equipped with 12-710 engine  
 Top speed gearing to 100 mph  
 Disc brakes provided to achieve 2.3 mph/sec full service braking from 80 mph, without dynamic assistance

### Engine

12N-710G3B-EC  
 High efficiency turbocharger  
 Electronic fuel injection  
 Provides for fastest acceleration  
 Lower emissions than competition

### Dual-Mode Version

Third rail operating capacity of up to 4,000 amps continuous

### AC Traction Technology

TA12-QBE main generator  
 One inverter per truck  
 All power electronics in common cabinet  
 AC-ITB2624 traction motors  
 Sealed tapered roller bearings  
 Oil-filled gear cases

- Bolsterless 2-axle truck
- Integrated Cab Electronics (ICE)
- EM2000 Advanced Computer
- Static HEP Capability
- Air System
- Reliability and Serviceability
- Electronic Air Brake System
- Aerodynamic Carbody





GM Locomotive Group

Manufactured at:  
La Grange, USA.  
London, Canada.  
Assembled at:  
Schenectady, N.Y.

Model : DE30AC  
Serial : 936623.23  
Class :  
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# EMD DE3oAC and DM3oAC

From Wikipedia, the free encyclopedia

The **EMD DE30AC** and **EMD DM30AC** are 46 locomotives built in 1997-1998 by **Electro-Motive Division** in the Super Steel Plant in Schenectady NY for the **Long Island Rail Road** of the **Metropolitan Transportation Authority (MTA)** in New York.

Originally split evenly between DE and DM locomotives, the fleet currently consists of 24 DE30AC locomotives (engines that operate on diesel power only) and 21 DM30AC locomotives (engines that can operate on both diesel and electric power).

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## Details and usage <sup>[edit]</sup>

The DE30AC and DM30AC locomotives replaced aging GP38s, **Alco** FA1/FA2s, F7As and F9As, and **MP15AC** and **SW1001** locomotives, with GP38s used to **push and pull** diesel trains and other locomotives used to provide **Head End Power** for the trains. The bodies of the DE30AC and the DM30AC are similar; the difference is the ability of the DM30AC to use electric third rail while the diesel engine is off, enabling the locomotive to use the **East River Tunnels** into **New York Penn Station**. DM30ACs have **third rail contact shoes**, permitting direct service from non-electrified lines in eastern Long Island via the western electrified main lines all the way to Penn Station. A few such trains a day run on the Port Jefferson, Oyster Bay, and Montauk Branches.

Single engines run with 6 cars or less and engines are generally placed on the East (Montauk) end of the train. Generally two engines are used when there are 7 or more cars. Of the original 46 locomotives, 45 are still in use: #503 (DM30AC) was damaged in an accident at Huntington on October 23, 2000, when it hit a shopping cart on the tracks, which shorted out the **third rail** and caused a fire.<sup>[4][5]</sup> It currently sits in the LIRR's **Morris Park yard** and has been stripped for spare parts to maintain the remainder of the fleet. #507 (DM30AC) suffered an electrical cabinet failure and was converted into DE30AC #423 at the Morris Park Facility.<sup>[6]</sup>

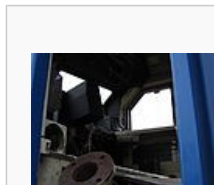
## Gallery <sup>[edit]</sup>



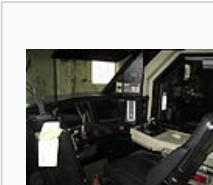
The remnants of engine #503 (March 2009)



The remnants of engine #503 (August 2011)



The remnants of the cab of engine #503 (August 2011)



The cab of engine #513.

< The *template **Infobox locomotive*** is being considered for merging. >

EMD DE30AC/DM30AC	
<span></span> <div>LIRR #515, an EMD DM30AC, in Farmingdale, NY.</div>	
Type and origin	
Power type	Diesel-electric (DE30AC and DM30AC) <p>Dual mode (Diesel-electric/straight electric) (DM30AC only)</p>
Builder	<b>General Motors Electro-Motive Division</b> (EMD)
Model	DE30AC (24) <p>DM30AC (21)</p>
Build date	1997 – 1999
Total produced	46
Specifications	
AAR wheel arr.	B-B
Gauge	4 <span> </span> ft 8½ <span> </span> in (1,435 <span> </span> mm)
Length	75 feet (22.86 <span> </span> m)
Locomotive weight	128 <span> </span> t (126.0 long tons; 141.1 short tons) <sup>[1]</sup>
Electric system (s)	750 <b>V DC Third rail</b> (DM30AC only)
Current collection method	<b>Contact shoe</b> (DM30AC only)
Prime mover	<b>12N-710G3B-EC</b>
Engine type	<b>Two-stroke V12 diesel</b>
Aspiration	Mechanically-assisted <b>turbocharger</b>
Displacement	8,520 cu in (139.6 L)
Cylinders	12
Cylinder size	710 cu in (11.63 L) <sup>[2]</sup>
Transmission	Alternating current <sup>[3]</sup>
Performance figures	
Maximum speed	160 <span> </span> km/h (99 <span> </span> mph) diesel, <p>130<span> </span>km/h (81<span> </span>mph) electric<sup>[1]</sup></p>
Power output	Diesel: 3,000 <span> </span> hp (2,200 <span> </span> kW) <sup>[1][3]</sup> <p>Electric: 2,151<span> </span>kW (2,885<span> </span>hp) (DM30AC only)<sup>[1]</sup></p> <p>Max at rail: 2,873<span> </span>hp (2,142<span> </span>kW)</p>
Traction effort	360 <span> </span> kN (81,000 <span> </span> lbf) <sup>[1]</sup>
Locomotive brake	Blended Brake
Train brakes	KNORR SA-26 air
Career	
Operator(s)	<b>Long Island Rail Road</b>
Number(s)	400-423 (DE30AC) <p>500-506, 508-522(DM30AC)</p>